# Te Whare Matihiko o Te Reo -

# digital tools for the revitalisation of te reo Māori

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## Abstract

Te Ipukarea - The National Māori Language Institute was established in 2008 partly to develop and advance a digital strategy for the creation, delivery, and assessment of Māori language curricula as well as the collection and dissemination of Māori knowledge across a range of domains. From online language tutorials and animations to digital recordings of interviews with native speakers of the Māori Language, Te Ipukarea provides a broad range of online resources free to access for our community to use and also as a commitment to supporting the revitalisation and rejuvenation of te reo Māori (see http://www. teipukarea.maori.nz/projects). Furthermore, we hope that these resources can be used by other Indigenous communities around the world as templates for their own work in the revitalisation of their endangered or minoritised languages.

Te Whare Matihiko o te Reo is a Ngā Pae o Te Māramatanga Māori Centre of Research Excellence funded research project over three years, comprising four interrelated digital components including:

1) an online digital te reo Māori language portal/advanced search engine;
2) a collection of waiata and haka that have not been published to be uploaded on to Tāmata Toiere (see http://www.waiata.maori.nz);
3) a Māori thesaurus (He Punakupu Taurite); and
4) a digital dictionary and app for He Pātaka Kupu (approved by Te Taura Whiri i te Reo Māori).

The project is designed to answer the question: 'Through the use of oral, visual, digital and written sources in, or about, te reo Māori, how can mātauranga and tikanga Māori be more easily accessed and applied to provide opportunities for Māori communities today including Māori language learning and teaching?' The objectives of the project are:

1) to understand how technology and new media can be utilised to revitalise and enable the teaching and learning of endangered and minoritised languages; including te reo Māori;
2) source and prepare appropriate sources of te reo Māori media for inclusion in the online portal;
3) develop corpora of te reo Māori from oral, visual, digital and/or written sources, and;
4) analyse te reo Māori corpora to enable the identification and documentation of

linguistic data and mātauranga Māori.

This paper will provide further insight into Te Whare Matihiko as a multi-pronged project using digital technology to support te reo Māori and add further value to Te Ipukarea's digital strategy.

## Introduction

Any discussion and questions of technology and new media in endangered language contexts must be grounded and framed within the realities of access. Although the digital divide continues to exist, there is evidence, however, of increased access to new wireless media among endangered and minority language users, including Māori.  Mediatisation of social interaction is already happening from the iPhone to Facebook and SMS text to Twitter (Scannell, 2012). In these new sites and spaces, language has become increasingly detached from its traditional, cultural and physical context. For minority and endangered languages, there is more material produced in the Internet than in traditional print or mass media. Rather than being mere consumers of mass media conveyed in a dominant majority language, minority-language users can, through the Internet and new media, become producers as well as consumers of media products in their own language (Ka'ai, O Laoire & Ostler, 2012). Over the years, technology from the tape recorder to digital archiving use has increased for the documentation and revitalisation of endangered languages, and is clearly useful. At the same time, many endangered languages appear to be making a successful transition to new media. This includes Māori. Very good sound recording equipment and secure storage of data have ensured that archives are now secured to provide important information for the preparation and preservation of language descriptions, grammars, dictionaries and edited collections of oral and written literature. Similarly, technology and digital archives are allies in preserving cultural knowledge (Ka'ai-Mahuta, 2012). For example, Tāmata Toiere, in the case of Māori waiata; Te Ipukarea, in the case of recording repositories of Māori knowledge in He Pātaka Mātauranga series 1 and 2 and Te Aka Māori-English, English-Māori Dictionary. These digital archives demonstrate the interface between recovering traditional knowledge and storing this knowledge through innovative technology for future generations. The use of technology in archiving and data storage has been well documented.

Historically, Māori have been quick to adopt new technology and skills they recognise can be of benefit to the advancement of their society. This is illustrated by Māori interest in literacy during the early period of the mission schools. These ancestors were quick to put their new skills to good use for the benefit of future generations. In the nineteenth century Māori wrote prolifically, adapting the oral arts for the press. This included documenting genealogy, tribal histories, cultural protocols, and waiata. In addition to the many Māori manuscripts is the significant collection of Māori language newspapers (Ka'ai-Mahuta 2012, p. 12).

While it is advocated that the oral tradition is essential to Māori cultural survival and that it should be defended and maintained, it is also viewed that Māori should utilise new technology in order to preserve their traditions. In *Something Torn and New: An African Renaissance*, Ngũgĩ wa Thiong'o (2009, p. 20) posits that, "to starve a people of its language is to kill a people's memory bank". Digital archives are tools for the revitalisation of the Māori language and the preservation of Māori culture; a digital memory bank of Indigenous Māori knowledge and an archive for future generations (Ka'ai-Mahuta, 2012).

### Te Whare Matihiko o Te Reo Research Project

Te Whare Matihiko o Te Reo is a research project spanning three years. It is located within a digitisation and new media construct and methodology because all four components, which constitute the project, involve using digital technology as a tool for Māori language revitalisation. The four components are:

1) The creation of a portal / advanced search engine, as a National Māori Language Data Base Portal and other Māori language resources such as publications, iwi radio, television programmes, community initiatives, websites and social media. This will be called Tomokanga Rauemi Reo Māori and will be the umbrella, or matua, for the remaining three components;

2) A collection of waiata and haka that have not been published including lyrics with a detailed explanation of the lyrics, a biography of the composer, audio and video files to be called Tāmata Toiere;

3) An online Māori Thesaurus to be called He Punakupu embedded in Te Aka Māori-English, English-Māori Dictionary;

4) The digitisation of He Pātaka Kupu monolingual Māori dictionary linked to Te Aka Māori-English, English-Māori Dictionary and the creation of an app for smartphone devices.

All four projects will have synchronised development in order for the desired outputs to be achieved within the three-year period. This is made possible by the fact that each project component is led or co-led by a different person. The project will undertake the following:

- Determine how technology and new media can be utilised to revitalise and enable the teaching and learning of endangered and minorities languages.
- Source and prepare appropriate sources of te reo Māori media.
- Analyse te reo Māori corpora to enable the identification and documentation of linguistic data and mātauranga Māori.
- Collect relevant materials to populate the e-repository archive/portal.

### Tomokanga Rauemi Reo Māori

Tomokanga Rauemi Reo Māori, an online digital Māori language portal, will be similar

to a library catalogue that has both basic and advanced search functions. It will have the capacity to bring up search results of pages that relate to Māori language groups, courses and resources. Each page will be tagged with several key words. For example, coffee group, Auckland, mums and bubs, and weekly. The user will be anyone searching for support in their Māori language journey, as well as researchers. Types of pages could include university courses, websites, coffee groups, Facebook groups, blogs, YouTube channels, immersion childcare, or any social media page where te reo Māori is the dominant feature. Only accessible print resources will be included to ensure that the portal is kept relevant and contemporary. Thus, this National Māori Language Portal will provide a much needed e-repository to disseminate critical material often created or produced by Māori language speakers which can empower other learners of the Māori language contributing to the preservation and survival of the language.

## Tāmata Toiere

Tāmata Toiere is an example of technology designed to preserve language and cultural knowledge as in the case of Māori waiata and to, hopefully, arrest the loss of beautiful compositions. The repository demonstrates the interface between recovering traditional knowledge and storing this knowledge through innovative technology to make it more accessible to future generations. This component will assemble a collection of waiata and haka, which have not yet been published including, lyrics, a detailed explanation of the lyrics, a biography of the composer, as well as audio and video files. It is hoped that compositions and composers are obtained from a range of tribal regions to capture the variations in dialects, histories, political commentaries, and oral narratives. However, this will be contingent on the support of the composer/s. It will be important to capture new oral literature. As Ka'ai-Mahuta (2012, p. 27) states, "this is a form of publishing that not only acts as another resource of Māori knowledge and tradition, but also benefits composers who can reach a larger audience with their poetry". The repository will also improve access of Māori to waiata and haka, provide a resource for learning and will ensure Māori control of Māori knowledge. Prolific Māori composers will be recruited to participate in the project. One composer each year for five years will be selected (based on availability) and a selection of their compositions will be researched and recorded along with the relevant material to complete each section of the repository.

## He Punakupu

He Punakupu is a Māori language thesaurus project. Currently, there is no comprehensive user-friendly thesaurus available for the Māori language. The project will deliver a comprehensive list of synonyms for the Māori words in the Te Aka Māori-English, English-Māori Dictionary. The synonyms will be added directly to the online version of Te Aka (http://maoridictionary.co.nz) where they will be available to the users immediately. Once the synonyms have been added to all relevant words on Te Aka, a hard-copy will be produced.

**He Pātaka Kupu**

The digitisation of He Pātaka Kupu – Te kai a te rangatira monolingual Māori language dictionary linked to Te Aka Māori-English, English-Māori Dictionary and app will give immediate access to the 1.85 million plus users of Te Aka Māori-English English-Māori Dictionary. Therefore, it will be made more accessible and potentially increase its reach into Māori speaking contexts such as Kura Kaupapa and other Māori-medium educational contexts where Māori is the first language.

The integration of technology to supplement Indigenous language education has been overlooked and underutilised (Grenoble & Whaley, 2006). Many speech communities, language activists and researchers are seeing new technologies as crucial catalysts in language revitalisation initiatives as it allows communities to create their own representations in culturally appropriate materials (Warschauer, 2006). Furthermore, the ongoing popularising of the internet has led to a new generation of mediated communication with message boards, chat rooms, internet sites creating a new space for the exchange of information and a new public arena in which minority and endangered languages, such as Māori, can have a real presence (Kaʻai, Moorfield & OLaoire, 2013).

Endangered languages require urgent attention to reverse language shift and prevent language death, therefore it is critical to build research capacity. Cultivating a cohort of skilled researchers is crucial to the future development of Māori language revitalisation. This project and its related components will attract new researchers to the field, encouraging the development of research skills, and cultivating a robust research environment in order to support new and emerging researchers to become high performing. This will lead to a high-end product and will attract Māori language users.

There is an ever-increasing amount of Māori language material available, not only in print resources, but also in a range of sources using new and developing technologies, including apps for digital devices, websites, and other avenues discussed earlier. Some have been designed specifically for learning the language. For example, the Te Whanake apps, the Te Aka Māori-English, English-Māori Dictionary website and the Te Reo Māori dictionary app. Others are focused on using the language for a range of purposes, such as sharing information and discussing issues, for example, He Pātaka Mātauranga and He Papa Huia on the Te Ipukarea website. These resources all have the potential to aid learners and speakers of te reo Māori. However, because these sources are quite disparate, many people are unaware of what is available and where to access them.

The online portal will provide easier access informing people of the full range of materials available to aid and enhance Māori language learning and teaching. The portal will also be of benefit to those doing research into te reo Māori using Māori language materials. It will provide easy access to material in te reo Māori relating to tikanga Māori, Māori history and contemporary issues in the full range of source types. The portal could be used by learners of the language as well as by researchers who know te reo Māori and will therefore be able to delve into aspects of tikanga Māori, waiata, haka, karakia, Māori history, etc. The portal will also be a valuable tool for researchers and academics seeking to

locate various digitally accessible material and information quickly.

## Conclusion

We know that, for minority and endangered languages, there is more material produced on the Internet than in the traditional print or mass media. Rather than being mere consumers of mass media conveyed in a dominant majority language, minority-language users can, through the Internet and new media, become producers as well as consumers of media products, in their own language. Te Whare Matihiko o Te Reo is a project, which seeks to do this through the development of several digital tools as resources to aid in the preservation and revitalisation of te reo Maori and to advance knowledge and expertise in the Māori language.

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